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Government

1966 FRUIT TREE CENSUS

Part I

Grapes





ONTARIO DEPARTMENT OF AGRICULTURE AND FOOD

PARLIAMENT BUILDINGS, TORONTO

EVERETT BIGGS DEPUTY MINISTER

HON, WM, A. STEWART MINISTER



FOREWORD

In 1966, a Fruit Tree Census was carried out by the Fruit and Vegetable Extention Service of the Ontario Department of Agriculture and Food. C. M. Riach, of the Farm Economics, Co-operatives and Statistics Branch, directed the tabulation of the census schedules and preparation of the statistical tables.

The results of this 1966 survey are being published in three parts, and every effort has been made to include useful information on the various crops. This publication presents the number of grape vines reported by this census. The second publication will deal with tender fruit; the third with apples. We hope that growers will find this report of value in deciding future plantings. We hope too, that industry personnel responsible for making crop forecasts will find this an up-to-date base for their predictions.

Throughout this report, reference is made to the 1961 and 1956 surveys. This year, a change was made in the "age" classification of grapes. The "4 years and up" category was divided into two groups: "4 to 20 years" and "21 years and up". Therefore, it is not possible to directly compare the statistics in these age categories with those from previous surveys.

In all cases where grape varieties are listed in the tables of this publication, they are listed in order of maturity.

For purposes of this survey, the Province was divided into the following six districts:

- St. Lawrence Valley District Counties of Glengarry, Stormont, Dundas, Carleton, Grenville, and Leeds;
- Eastern Ontario District Counties of Frontenac, Lennox and Addington, Hastings, Prince Edward, Northumberland, Peterborough, Durham, Ontario, and Victoria:
- 3. Georgian Bay District Counties of Simcoe, Grey, Bruce, and Dufferin;
- Central Ontario District Counties of York, Peel, Halton, and North Wentworth:
- Niagara District Counties of Lincoln, Welland, South Wentworth, and Haldimand;
- Southwestern Ontario District Counties of Brant, Norfolk, Oxford, Perth, Wellington, Waterloo, Elgin, Middlesex, Kent, Lambton, Essex, and Huron.

Every effort was made by the Fruit and Vegetable Extension Service to make this report as complete as possible. We do acknowledge the fact that this report does not represent 100 percent of the growers. There are approximately 1,700 grape growers on the processors' lists in the Niagara Peninsula; this report lists statistics received from 1,446 growers.

Appreciation is expressed to R. K. Matthie, Grape Growers Marketing Board; O. A. Bradt, Research Scientist; J. R. vanHaarlem, Consultant in Marketing, Horticultural Research Institute of Ontario; and R. Wilcox, Extension Specialist, in preparing the manuscript for this publication.

B. E. Beeler, Chairman Fruit Tree Census Committee

GRAPE PRODUCTION

Grape growing is one of the few fruit crops showing a steady growth in production, and an increase in land devoted to this crop is taking place each year.

Early records indicate that in 1909 there were about 10,000 acres in home gardens and commercial plantings. In 1942 the estimate of grapes planted was changed to include only commercial acreage, and at present it is estimated at nearly 23,000 acres in the Niagara Peninsula.

Extensive research is conducted on grape production to increase the quality and yield of grapes. The choice of varieties for all purposes is now greater than ever, but it is interesting to look at the list of recommended varieties for the period 1926-1930 which is as follows (in approximate order of maturity): Winchell, Moore, Campbell, Lindley, Worden, Brighton, Diamond, Niagara, Concord, Herbert, Agawam, and Vergennes.

Only three varieties have remained commercially important of this group: Niagara, Concord, and Agawam. A few plantings of Moore, Campbell, Worden, Brighton, and Vergennes still remain in small quantities in the older vineyards but have no commercial application today.

The grape crop is the second largest fruit crop of Ontario in volume, surpassed only by apples. Peaches have dropped to third place. The average crop in the 1961-65 period was 51,250 tons, with a record of 62,817 tons produced in 1965. The 1966 crop was 58,250 tons. It is conceivable that a crop of 70,000 tons will be reached in a few years. In comparison, the average production in the 1951-45 period was about 29,000 tons; indicating a yearly growth of just over 1,000 tons per year since that period.

Grape growing is concentrated in the counties of Lincoln, Welland, and Wentworth in the Niagara Peninsula. There are small acreages in Halton, Peel, Norfolk, Essex, and Kent Counties. Grapes thrive fairly well without winter protection throughout most of southwestern Ontario. However, the most favorable areas are those where the winter temperatures are moderated by the influence of Lake Erie and Lake Ontario and where the summer temperatures are high. Grapes require heat to develop high quality.

The general location for grapes is of great

importance. In the Niagara Peninsula, the general aspect is north facing Lake Ontario with the escarpment to the south. The most favored locations are back from the lakeshore, just below and on the first rise of the escarpment where spring and summer temperatures are often several degrees higher than nearer to the lake. However, the lake influence sometimes prevents injury from late spring and early fall frosts, while vineyards close to, or above, the escarpment are more susceptible to such injury.

In recent years there has been an increase in the amount of grapes planted on the escarpment. The survey of the Ontario Department of Agriculture and Food, using aerial photography, shows that in 1965, 37 percent of the grape acreage is located there. Grape acreage by Township is shown below. The amount located on the escarpment is indicated in column A; column B shows the amount grown below the escarpment:

	A (Above Escarpment)	B (Below Escarpment)	TOTAL
	Acres	Acres	Acres
Barton	205	95	300
Saltfleet	1,069	1,457	2,526
N. Grimsby	1,277	448	1,725
S. Grimsby	561		561
Clinton	1,540	2,559	4,099
Louth	1,222	2,880	4,102
Pelham	1,117	_	1,117
Grantham	_	2,584	2,584
Thorold	689	_	689
Stamford	746		746
Niagara	_	4,513	4,513
TOTAL	8,426	14,536	22,962

Except for sweet cherries and small fruits, peaches have tended to displace other fruit crops from the tender-fruit soils in the last thirty years. Grapes, on the other hand, mature better and tend to higher quality on the heavier clay soils, although some varieties may not yield as well on these soils as they do on the lighter, tender-fruit soils. There is sufficient land in the Niagara Peninsula for expansion of the grape acreage both above and below the escarpment in areas where tender-fruit crops are not generally grown.

VARIETIES

With the development of the French Hybrids, a large number of new varieties have been made available for wine making. These hybrids are a group of grape varieties originated in France by crossing European varieties (Vitis vinifera) with certain of the wild American species. The French stayed away from Vitis labrusca (Concord, etc) and used mainly V. rupestris and V. lincecumii in their crosses. Several French plant breeders have been carrying on this work for 75 years with the object of securing varieties bearing fruit similar to the European varieties but possessing the hardy, disease-resistant vine characteristics of the wild American species.

There is now a long list of these French Hybrids, introduced by several plant breeders, possessing many different characteristics. In 1946, the Horticultural Experiment Station (now the Horticultural Research Institute of Ontario), Vineland Station, Ontario, obtained directly from France 35 of the earlier-maturing Hybrids which seemed to warrant trial under Niagara conditions. In addition, one local winery imported a number of French Hybrids for trial and several of these have found acceptance also.

An increasing number of French Hybrids, commonly referred to as "special" varieties, are being used to make wine in Ontario. To show the great development in the search for better wine, the following is a list of all varieties used for processing in 1966 and the quantities delivered to the wineries.

1 to 25 Tons	26 to 50 Tons	51 to 100 Tons
Alden	BS 2862	Buffalo
Baco	Missouri Riesling	Canada Muscat
Beta	N. Y. Muscat	Ontario
Caco	Van Buren	Westfield
Diana		
Lomanto		
Patricia		
Pinot Blanc		
S 5279		
S 7053		
S 8229		
S 8357		
S 10868		
Seneca		

SV 172

Vergennes

101 to 500 Fons	501 to 1,000 Tons	1,001 to 5,000 Tons
Foch	Catawba	Agawam
Fredonia	Dutchess	Delaware
President		Elvira
S 1000		S 10878
S 9110		
S 9549		
Veeport		
		Newer Experimental Varieties
5,001 to 10,000 Tons	Over 10,000 Tons	(usually less than ton lots)
Niagara	Concord	BS 2846
		Couderc 29935
		Gamay
		Beaujolais
		HES 35122
		HES 35123
		Pinot Chardonnay
		Johannesburg Riesling
		zuesiing

GRAPE VINE CENSUS

In order to establish the trend and plantings for the varieties of grapes grown in the Niagara Peninsula, a census of vines was undertaken by the Ontario Department of Agriculture and Food, in the fall and winter of 1966-67, similar to the 1961 and 1956 vine count. More than 90 percent of the grape growers, large and small, were included in the census, and many of these growers have only a small acreage as shown by TABLE I, page 5.

Approximately 25 percent of the farms growing grapes have 500 or less grape vines, about one acre or less. Many of these growers are city workers who live in rural areas and grow fruit mainly for themselves. Approximately 50 percent have less than 2,500 vines; about 17 percent, between 2,500 and 5,000 vines each. The remaining percentage of grape growers produce the bulk of the commercial grape crop of 56,000 tons or more.

TABLE II shows the total number of grape vines included in the census by district and by variety.

The 1966 survey indicates an increase in plantings over 1961 of 11 percent and 35 percent over 1956. The Niagara Peninsula continues to

represent 99 percent of the total number of vines in Ontario.

For comparison, the number of vines in 1966 and the previous two surveys are shown (TABLE IV).

1966 — 8,221,572 1961 — 7,413,380 1965 — 6,108,780

The total number of vines for the more important varieties for each of the three surveys is as follows:

Variety	1956	1961	1966
Concord	3,610,612	3,375,922	3,522,452
Niagara	672,029	1,022,223	1,127,129
Agawam	270,834	446,890	532,145
Delaware	197,882	341,978	303,730
Catawba	104,442	170,485	190,329
Fredonia	553,966	611,253	541,299
Seibel 10878	192,382	431,340	443,673
Seibel 9110	58,757	83,231	24,564
Elvira	112,310	377,593	514,905
Seibel 9549	*	28,743	114,903
M. Foch	*	*	161,521
N. Y. Muscat	*	*	35,013
Dutchess	*	*	133,971
Veeport	*	a)c	117,243
Canada Muscat	*	*	48,090
President	*	*	41,404
Van Buren	42,411	*	45,526
Other Varieties	*	*	323,675

Total 5,815,625 6,889,658 8,221,572

* Actual Figures Not Available

TABLES III (A) to III (E) show the number of grape vines by age group and by variety. In the 1966 survey, the "over three years of age" category was divided into two groups: "4 to 20 years of age" and "21 years and over". Consequently, it is not possible to directly compare the census of 1956 and 1961 with that of 1966. The following comparison of the *total* vines in the three years shows a decline in the number of vines in the one- to three-year category as is indicated below:

% of TOTAL VINES

1966	_	598,904	7.3
1961	_	1,211,803	16.3
1956		773,763	12.6

This indicates that plantings are now more in line with the present outlook for marketing. However, the sales of grape vines as reported by nurseries to the Dominion Bureau of Statistics indicate that almost double the number of vines have been sold in the 1964, 1965, and 1966 period as are shown by the census in 1966. Mortality of vines, removal shortly after planting, and other reasons, accounts for some of the difference. The number of vines used to "fill-in" for vines in older vinevards which die and are not included in the one- to three-year age group, probably accounts for a large portion of the unreported young vines. If this is correct, the number of vines reported in the one- to threeyear column can be considered as practically all new acreage.

There are noticeable increases in the plantings of new varieties, principally for wine making; the highest percentage is in the one- to three-year category. This is in line with industry recommendations, and is bringing production and marketing into a better balance.

Growers were asked on the census form to indicate what vines they anticipated removing in the next two years. The results are shown in TABLE V.

GRAPE MARKETING

The value of grapes sold in Ontario in 1966 was \$5,932,741, considerably higher than the average value of \$5,017,330 in the 1961-65 period. In the 1951-55 period, the average value was \$3,255,460.

Sales of grapes to processors have been around 70 percent of the crop in recent years; the balance sold as fresh grapes for table use, or for home wine-making and preserving, or to processors in the nearby Great Lakes region of the United

States. The following is a breakdown of the sales for the period 1962-66:

	1962 (Tons)	1963 (Tons)	1964 (Tons)	1965 (Tons)	1966 (Tons)				
Amount Processed									
—wine, etc. —iams and	30,948	32,112	30,620	33,229	36,356				
juice	4,625	4,461	5,517	4,422	6,579				
	35,573	36,573	36,137	37,651	42,935				
Export Sales	595	7,627	14,330	10,000	7,332				
Surplus		_	_	5,000	500				
Domestic and									
Local Sales	8,339	7,100	6,433	10,149	7,483				
Total Crop	44,507	51,300	56,900	62,800	58,250				

Along with the growth in the Ontario crop, there have been many new acres planted in British Columbia where it is estimated that there are 2,000 acres and production is increasing each year.

Importation of fresh grapes (vinifera type) for table use and home wine-making has greatly increased, and in 1966 reached a record total of 131,000 tons. Approximately one third of the amount imported is used for wine making, mostly by home wine-makers, but a quantity is used by British Columbia wineries. (Ontario wineries use only Ontario-grown grapes.)

The amount of wine imported for sale in Canada is approximately 4,000,000 gallons per year; the largest volume is imported from France, Italy, Portugal, Australia, South Africa, United States, Great Britain, Spain, and West Germany. Sales of Canadian wine are over 8,000,000 gallons each year.

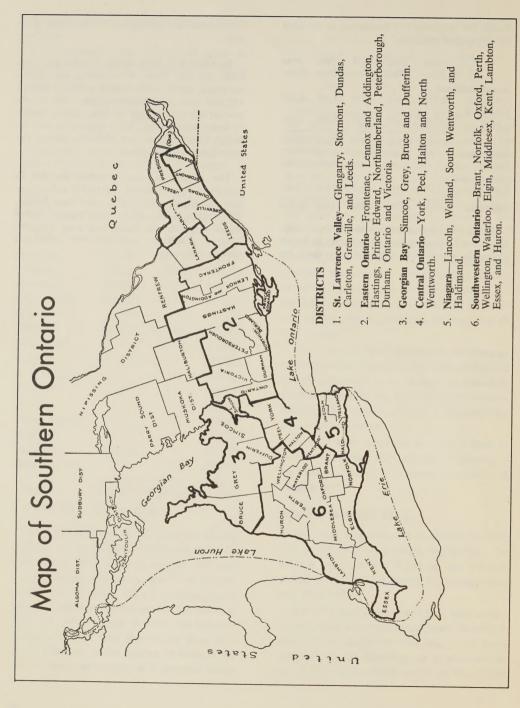


TABLE I — Farms Reporting Grapes
Classified According to Number of Vines on Farm

No. farms			Ontario	Niagara	Southwestern Ontario	Total Province	% of total
	No. farms	No. farms	No. farms	No. farms	No. farms	No. farms	%
7	13	9	7	69	61	166	11.47
. 1		1	5	177	18	202	13.97
	_		5	397	11	413	28.57
			2	248	3	253	17.49
_		_	-	205	_	205	14.18
_				80	-	80	5.53
	_	_		52		52	3.60
_			_	23	1	24	1.66
		_		36	_	36	2.49
-	-	_	_	15		15	1.04
8	13	10	19	1,302	94	1,446	100.00
	1	1 — — — — — — — — — — — — — — — — — — —	1 — 1 — — — — — — — — — — — — — — — — —	1 — 1 5 — — 2 — — 2 — — — — — — — — — — — — — — — — — — —	1 — 1 5 177 — — — 5 397 — — — 2 248 — — — 205 — — — 80 — — — 52 — — — 23 — — — 36 — — — 15 8 13 10 19 1,302	1 — 1 5 177 18 — — — 5 397 11 — — — 2 248 3 — — — 205 — — — — 80 — — — — 52 — — — — 23 1 — — — 36 — — — — 15 — 8 13 10 19 1,302 94	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

6.51 100.00

Number of farms in each district as a % of total

0.55 0.90 0.69 1.31 90.04

TABLE II — Grape Vines in the Province of Ontario
Classified by Variety and by District

Variety	St. Lawrence Valley	Eastern Ontario	Georgian Bay	Central Ontario	Niagara Peninsula	Southwestern Ontario	Total	Variety as a % of total
	No. vines	No. vines	No. vines	No. vines	No. vines	No. vines	No. vines	%
Van Buren			_	250	44,925	300	45,526	0.55
Foch	_	-	_		161,507	14	161,521	1.96
Fredonia	9	18	251	5,420	528,775	6,826	541,299	6.59
Elvira	_	1	_		514,896	8	514,905	6.26
Seibel 9549	· —			-	114,832	71	114,903	1.40
New York Muscat	_	1	_		34,786	226	35,013	0.42
Delaware	2	4	_	_	303,501	223	303,730	3.70
Seibel 10878	_			_	443,536	137	443,673	5.39
Niagara	4	30	1	964	1,121,080	5,050	1,127,129	13.71
Dutchess		_	_		133,946	25	133,971	1.63
Veeport	_		_	_	117,195	48	117,243	1.43
Concord	174	31	45	3,961	3,502,583	15,658	3,522,452	42.84
Seibel 9110		_		_	24,539	25	24,564	0.30
Agawam	0.0		-	50	531,381	714	532,145	6.47
Canada Muscat	_	1			47,928	161	48,090	0.59
Catawba			_		190,099	230	190,329	2.31
President			_	-	41,404		41,404	0.51
Other Varieties	10	44	51	3,008	315,804	4,809	323,675	3.94
TOTAL	199	130	348	13,653	8,172,717	34,525	8,221,572	100.00
Number of vines in each			11111	Till				
district as a % of tot	al 0.01	0.01	0.01	0.17	99.39	0.41	100.00	

TABLE III (A) — Grape Vines in the Province of Ontario
Classified by Variety and by Age Group

Variety	1 to 3 yrs.	4 to 20 yrs.	21 yrs. & over	Total	Variety as a % of Total
	No. vines	No. vines	No. vines	No. vines	%
Van Buren	5,366	39,110	1,050	45,526	0.55
Foch	50,845	105,396	5,280	161,521	1.96
Fredonia	22,840	421,544	96,915	541,299	6.59
Elvira	35,429	416,789	62,687	514,905	6.26
Seibel 9549	60,833	54,070	_	114,903	1.40
New York Muscat	19,009	15,704	300	35,013	0.42
Delaware	12,796	282,074	8,860	303,730	3.70
Seibel 10878	15,345	418,938	9,390	443,673	5.39
Niagara	75,944	712,431	338,754	1,127,129	13.71
Dutchess	16,847	107,719	9,405	133,971	1.63
Veeport	54,851	57,819	4,573	117,243	1.43
Concord	89,332	1,806,078	1,627,042	3,522,452	42.84
Seibel 9110	1,929	19,935	2,700	24,564	0.30
Agawam	51,479	353,398	127,268	532,145	6.47
Canada Muscat	11,263	32,967	3,860	48,090	0.59
Catawba	19,715	135,574	35,040	190,329	2.31
President		38,172	3,232	41,404	0.51
Other Varieties	55,081	206,000	62,594	323,675	3.94
TOTAL	598,904	5,223,718	2,398,950	8,221,572	100.00
Number of vines in each age group as a % of total.	7.28	63.54	29.18	100.00	

TABLE III (B) — Grape Vines in the Southwestern Ontario District Classified by Variety and by Age Group

Variety	1 to 3 yrs.	4 to 20 yrs.	21 yrs. & over	Total	Variety as a % of Total
	No. vines	No. vines	No. vines	No. vines	%
Van Buren		300	_	300	0.86
Foch	_	12	2	14	0.04
Fredonia	1,194	5,052	580	6,826	19.78
Elvira	8	_	_	8	0.02
Seibel 9549	45	26	_	71	0.20
New York Muscat	25	201		226	0.66
Delaware	75	148	_	223	0.64
Seibel 10878	25	112	_	137	0.40
Niagara	473	3,668	909	5,050	14.63
Dutchess		25	_	25	0.07
Veeport	25	23		48	0.14
Concord	1,912	7,515	6,231	15,658	45.35
Seibel 9110	25 .		_	25	0.08
Agawam	54	576	84	714	2.06
Canada Muscat	66	95		161	0.47
Catawba		130	100	230	0.67
President		_	_	_	_
Other Varieties	234	2,183	2,392	4,809	13.93
TOTAL	4,161	20,066	10,298	34,525	100.00
Number of vines in each age group as a % of total.	12.05	58.12	29.83	100.00	

TABLE III (C) — Grape Vines in the Niagara District Classified by Variety and by Age Group

Variety	1 to 3 yrs.	4 to 20 yrs.	21 yrs. & over	Total	Variety as a % of Total
	No. vines	No. vines	No. vines	No. vines	%
Van Buren	5,366	38,509	1,050	44,925	0.54
Foch	50,845	105,384	5,278	161,507	1.98
Fredonia	21,437	412,508	94,830	528,775	6.47
Elvira	35,420	416,789	62,687	514,896	6.30
Seibel 9549	60,788	54,044	_	114,832	1.41
New York Muscat	18,983	15,503	300	34,786	0.42
Delaware	12,720	281,925	8,856	303,501	3.72
Seibel 10878	15,320	418,826	9,390	443,536	5.42
Niagara	75,351	708,433	337,296	1,121,080	13.72
Dutchess	16,847	107,694	9,405	133,946	1.64
Veeport	54,826	57,796	4,573	117,195	1.43
Concord	87,179	1,798,187	1,617,217	3,502,583	42.86
Seibel 9110	1,904	19,935	2,700	24,539	0.30
Agawam	51,425	352,822	127,134	531,381	6.50
Canada Muscat	11,197	32,871	3,860	47,928	0.59
Catawba	19,715	135,444	34,940	190,099	2.32
President	´ —	38,172	3,232	41,404	0.51
Other Varieties	54,846	202,339	58,619	315,804	3.87
TOTAL	594,169	5,197,181	2,381,367	8,172,717	100.00
Number of vines in each age group as a % of total.	7.27	63.59	29.14	100.00	

TABLE III (D) — Grape Vines in the Central Ontario District Classified by Variety and by Age Group

Variety	1 to 3 yrs.	4 to 20 yrs.	21 yrs. & over	Total	Variety as a % of Total
	No. vines	No. vines	No. vines	No. vines	%
Van Buren		250		250	1.83
Foch	_				-
Fredonia	200	3,715	1,505	5,420	39.69
Elvira			-	-	_
Seibel 9549	_	-	_		
New York Muscat					
Delaware					-
Seibel 10878	_	_			
Niagara	106	318	540	964	7.07
Dutchess	Standards				
Veeport				gamen	
Concord	200	331	3,430	3,961	29.01
Seibel 9110					
Agawam			50	50	0.36
Canada Muscat	www.com			_	
Catawba	**************************************			_	-
President			_		
Other Varieties		1,473	1,535	3,008	22.04
TOTAL	506	6,087	7,060	13,653	100.00
Number of vines in each	2.70	44.50	51.70	100.00	
age group as a % of total.	3.70	44.58	51.72	100.00	

TABLE III (E) — Grape Vines in the St. Lawrence Valley, Eastern Ontario and Georgia Bay District, Classified by Variety and Age Group

Variety	1 to 3 yrs.	4 to 20 yrs.	21 yrs. & over	Total	Variety as a % of Total
	No. vines	No. vines	No. vines	No. vines	%
Van Buren					
Foch			_		_
Fredonia	9	269		278	41.06
Elvira	1			1	0.15
Seibel 9549			_		-
New York Muscat	1	_	-	1	0.15
Delaware	1	1	4	6	0.89
Seibel 10878		_	_	-	
Viagara	14	12	9	35	5.17
Dutchess			_		
Veeport	_		_		_
Concord	41	45	164	250	36.93
Seibel 9110			_	_	
Agawam			-	_	_
Canada Muscat		1	_	1	0.15
Catawba				_	
President		_			
Other Varieties	1	56	48	105	15.50
TOTAL	68	384	225	677	100.00
Number of vines in each					
ge group as a % of total.	10.04	56.72	33.24	100.00	

TABLE IV — Grape Vines in the Province of Ontario as Reported in the 1966 Survey Compared
With Numbers Reported in the 1961 Survey

Variety	1956 Survey	1961 Survey	1966 Survey	1966 as % of 1961
	No. vines	No. vines	No. vines	%
Van Buren	*	*	45,526	
Foch	*	*	161,521	
Fredonia	553,970	611,253	541,299	88.60
Elvira	112,310	377,593	514,905	136.40
Seibel 9549	*	28,743	114,903	399.80
New York Muscat	*	*	35,013	
Delaware	197,880	341,978	303,730	88.80
Seibel 10878	192,380	431,340	443,673	102.90
Niagara	672,030	1,022,223	1,127,129	110.30
Dutchess	*	*	133,971	
Veeport	*	*	117,243	-
Concord	3,610,610	3,375,922	3,522,452	104.30
Seibel 9110	58,750	83,231	24,564	29.50
Agawam	270,840	446,890	532,145	119.10
Canada Muscat	*	*	48,090	
Catawba	104,440	170,485	190,329	111.60
President	*	*	41,404	Assessed
Other Varieties	335,570	523,722	323,675	61.80
TOTAL	6,108,780	7,413,380	8,221,572	110.90

^{*} Included in "Other Varieties".

TABLE V-Anticipated Planting and Removal of Grape Vines During 1967 and 1968

District		New Plantings — 1968	Anticipated Removals 1967 — 1968	
	No. farms	No. acres	No. farms	No. acres
Southwestern Ontario	2	2	_	
Niagara	109	375	103	348
Central Ontario			3	5
Georgian Bay	_	_	_	
Eastern Ontario	_	_	_	Macrosom
St. Lawrence Valley	_			_
TOTAL PROVINCE	111	377	106	353

